APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,308	04/05/2001	Masahiro Someno	Q63977	4174

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EXAMINER
PHAM, THIERRY L

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/826,308	SOMENO ET AL.
	Examiner	Art Unit	
	Thierry L Pham	2624	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
> - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *10 August 2001*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-17* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *10 August 2001* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/10/01, 6/12/03*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

• Responsive to Unsigned Declaration has been received/acknowledged on 8/10/2001.

•Responsive to substitute specification including drawings, claims, abstracts have been received/acknowledged on 8/10/2001.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (JP 10143339, translation provided with office action), and in view of Takeoka et al (U.S. 6665082).

Regarding claim 1, Sato discloses a program (host computer includes program 1, fig. 1) for enabling a computer (computer 10 also includes spooler 12, fig. 1) to perform a process for reading and outputting printing data (reading and outputting print data to printer, fig. 1), which controls a printer (printer 20, fig. 1), wherein said program enables the computer to implement:

• a process for dividing printing data (spooler 12 includes spool production unit 11 for dividing print job into multiple segments, par. 28, page 4), which controls printing of the printer, into plural fragments of data;

• a process for creating data (spooler 12 includes spool file creation unit 15 for creating spool files and stored in spool files storage 11, fig. 1, par. 25, page 4), which include information for specifying said file, and recording it as a print spooling file separately from said file;

• a process for reading (spool file reclosing 13 for reading spool files 11, fig. 1, par. 25, page 4) said print spooling file;

• a process for reading (output destination 19 for reading spool files and transmits to printer 20, fig. 1, par. 25, page 4) the specified file to output printing data included in said file; and

• a process for deleting (spooler 12 includes spool file cutout 16 for deleting spool files after printing is completed, fig. 1, par. 25, page 4 and par. 38-42, page 6) a file including outputted printing data.

However, Sato fails to explicitly disclose a method for adding information for discriminating the fragments of data to the respective fragments of data, and recording them as a plurality of files.

Takeoka, in the same field of endeavor for printing system, teaches a method for adding information for discriminating the fragments of data to the respective fragments of data, and recording them as a plurality of files (a computer program incorporated within the printer controller 10 (fig. 1) for dividing print data into multiple segments/packets as shown in fig. 5 and each packet includes information describing the segments/packets and such information includes print command and packet data format header (figs. 19-22, col. 7, lines 23-56)).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sato by adding discriminating information of each segments/packets as per teachings of Takeoka because of a following reason: (•) shorten the printing time by dividing the print data into multiple packets/segments and saves it as spool files (Sato, par. 12, page 2); (•) it will suffice to provide the printer with a buffer memory of small capacity due to a method of dividing print data into multiple segments/packets, thereby lowering the cost of printer (col. 5, lines 1-5); (•) by adding discriminating information regarding each segments/packets will allow the system to easily recognize its contents and to increase operating efficiency.

Therefore, it would have been obvious to combine Sato with Takeoka to obtain the invention as specified in claim 1.

Regarding claim 2, Sato discloses a program for enabling a computer (host computer includes program 1, fig. 1) to perform a printing process, wherein said program enables the computer to implement:

• a process for creating printing data (spooler 12 includes spool file creation unit 15 for creating spool files and stored in spool files storage 11, fig. 1, par. 25, page 4), which controls a printer, in accordance with a printing instruction;

• a process for determining whether or not (spooler 12 includes a server management means 18 for determining whether the transmission is possible based on transmission flag, par. 25, page 4) a print processor capable of using in the computer can control transfer to a printer in accordance with printing data created by the computer;

• a process for dividing (host computer 10 includes spool production unit for dividing print job into multiple segments, par. 28, page 4) the created printing data into plural fragments of data;

However, Sato fails to explicitly disclose a method for adding information for discriminating the fragments of data to the respective fragments of data so as to record them as a plurality of files when it is determined that the print processor can control transfer to the printer in accordance with printing data created by the computer; and a process for creating data, which includes information for specifying said file, separately from said files.

Takeoka, in the same field of endeavor for printing system, teaches a method for adding information for discriminating (a computer program incorporated within the printer controller 10 (fig. 1) for dividing print data into multiple segments/packets as shown in fig. 5 and each packet includes information describing the segments/packets (figs. 19-22, col. 7, lines 23-56)) the fragments of data to the respective fragments of data so as to record them as a plurality of files; and a process for creating data, which includes information for specifying said file, separately from said files (Note: segments/packets data files are different from spool files and therefore, spool files and packets data are different and separate; Takeoka teaches a method for dividing print data into multiple segments with description header but fails to save it as a spool file; Sato teaches a method for dividing print data into plurality of segments and stored it as spool files.).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sato by adding discriminating information of each segments/packets as per teachings of Takeoka because of a following reason: (•) shorten the printing time by dividing the print data into multiple packets/segments and saves it as spool files (Sato, par. 12, page 2); (•) it will suffice to provide the printer with a buffer memory of small capacity due to a method of dividing print data into multiple segments/packets, thereby lowering the cost of printer (col. 5, lines 1-5); (•) by adding discriminating information regarding each segments/packets will allow the system to easily recognize its contents and to increase operating efficiency.

Therefore, it would have been obvious to combine Sato with Takeoka to obtain the invention as specified in claim 2.

Regarding claim 3, Takeoka and Sato further disclose the program according to claim 2, wherein said data, which includes information (a computer program incorporated within the printer controller 10 (fig. 1) for dividing print data into multiple segments/packets as shown in fig. 5 and each packet includes information describing the segments/packets (figs. 19-22, col. 7, lines 23-56, Takeoka)) for specifying the file, includes information indicating that the data is created by the process according to said program. It is also known in the art, prior to store any divided files, one of ordinary skill in the art must create a file name manually or defaults, i.e., spool file 1.txt for identification purposes.

Regarding claim 4, the combinations of Sato and Takeoka both teaches a program for enabling a computer to further to implement: a process for enabling to receive an instruction of plurals sets of printing (plurality of spool files as taught by Sato, page 4); and a process for making said data, which include information (information describing the print job segment, fig. 19-22, Takeoka) for specifying the file, include information concerning the instruction of plural sets of printing, when said instruction of plural sets of printing is received (it is also known in the art, prior to store any divided files, one of ordinary skill in the art must create a file name manually or defaults, i.e., spool file 1.txt for identifying purposes).

Regarding claims 5-6 recite limitations that are similar and in the same scope of invention as to those in claim 2 above; therefore, claims 5-6 are rejected for the same rejection rationale/basis as described in claim 2. Note: host computer 10 includes all the hardware devices means for dividing, creating and receiving print data. Please see claim 2 for more details.

Regarding claim 7, Sato discloses a program (host computer includes program 1, fig. 1) for enabling a computer to perform a process for reading and outputting printing data, which controls a printer, wherein said program enables the computer to implement: a determining

process for determining whether or not (host computer 10 includes spool production unit for dividing print job into multiple segments, par. 28, page 4) a print spooling file includes information for specifying one file among plural files which includes printing data (it is also known in the art, prior to store any divided files, one of ordinary skill in the art must create a file name manually or defaults, i.e., spool file 1.txt for identifying purposes);

a process for reading (output destination 19 for reading spool files and transmits to printer 20, fig. 1, par. 25, page 4) said print spooling file to refer to information for specifying said file when it is determined that the print spooling file includes the information for specifying a file;

a process for reading (spool file reclosing 13 for reading spool files 11, fig. 1, par. 25, page 4) the specified file to output printing data included in the file; and

a process for deleting (spooler 12 includes spool file cutout 16 for deleting spool files after printing is completed, fig. 1, par. 25, page 4 and par. 38-42, page 6) a file including the outputted printing data.

Regarding claim 8, Sato further discloses the program according to claim 7, wherein said program enables the computer further to implement: a process for determining whether or not the print spooling file includes information concerning an instruction of plural sets (plurality of spool files, par. 25-28) of printing: a process for reading the specified file to create and record a file comprising printing data in a unit of page (par. 25-28) instead of a process for reading the specified file to output printing data included in the file when it is determined that the print spooling file includes information concerning an instruction of plural sets of printing; and a process for referring to said file comprising printing data in a unit of page in accordance with an instruction of plural sets of printing to output the printing data in a unit of page plural times (each spool file represents a page unit of a print job, par. 25-28).

Regarding claims 9-10 recites limitations that are similar and in the same scope of invention as to those in claim above; therefore, claims 9-10 are rejected for the same rejection rationale/basis as described in claim 7.

Regarding claim 11 recites limitations that are similar and in the same scope of invention as to those in claim 2 above; therefore, claim 11 is rejected for the same rejection rationale/basis as described in claim 2.

Regarding claim 12, Takeoka further teaches the program according to claim 11, wherein said command for controlling the printer includes a cancellation (cancellation command, fig. 4, also see interrupt commands, cols. 9-10), command for stopping printing.

Regarding claim 13 recites limitations that are similar and in the same scope of invention as to those in claim 2 above; therefore, claim 13 is rejected for the same rejection rationale/basis as described in claim 2.

Regarding claim 14, Sato discloses a program (host computer includes program 1, fig. 1) for enabling a computer to perform a process for reading and outputting printing data controlling a printer, wherein said program comprising: a process for reading a print spooling file (spool file reclosing 13 for reading spool files 11, fig. 1, par. 25, page 4), which includes information for specifying one file among plural files which include printing data (it is also known in the art, prior to store any divided files, one of ordinary skill in the art must create a file name manually or defaults, i.e., spool file 1.txt for identifying purposes), and controlling transfer to the printer (transfer via communication bus to printer 20, fig. 1); a process for reading a file (output destination 19 for reading spool files and transmits to printer 20, fig. 1, par. 25, page 4) including the printing data (a first file), which is specified by said print spooling file, to output the printing data.

However, Sato fails to explicitly teaches a process for determining during the reading of said first file whether a file, which is specified by said print spooling file and into which a command for controlling a printer is recorded, (a second file) has been updated or not; and a process for reading said second file when it is determined that said second file has been updated to output a command for controlling the printer; and information for specifying a file into which a command for controlling the printer is recorded.

Takeoka, in the same field of endeavor for printing system, teaches a process for determining during the reading of said first file whether a file, which is specified by said print spooling file and into which a command for controlling a printer is recorded (Takeoka teaches a method for dividing print data into multiple segments/packets and each packets file includes a header and command information, i.e., "sy=3, start command, sy=2, data end", figs. 3-6 and fig. 21-22, cols. 7-8 as when to start a print job and when to end a print job), (a second file) has been updated or not; and a process for reading said second file (printer controller for reading plurality of packets and determine which packets have been printed, fig. 10 & 18) when it is determined that said second file has been updated to output a command for controlling the printer; and information (i.e. command information and data packet format, fig. 21-22) for specifying a file into which a command for controlling the printer is recorded.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sato as per teachings of Takeoka because of a following reason: (●) shorten the printing time by dividing the print data into multiple packets/segments and saves it as spool files (Sato, par. 12, page 2); (●) it will suffice to provide the printer with a buffer memory of small capacity due to a method of dividing print data into multiple segments/packets, thereby lowering the cost of printer (col. 5, lines 1-5); (●) by adding discriminating information regarding each segments/packets will allow the system to easily recognize its contents and to increase operating efficiency.

Therefore, it would have been obvious to combine Sato with Takeoka to obtain the invention as specified in claim 14.

Regarding claim 15, Takeoka further discloses the program according to claim 14, wherein said command for controlling the printer includes a cancellation command (cancellation command, fig. 4, also see interrupt commands, cols. 9-10), for stopping printing.

Regarding claim 16 recites limitations that are similar and in the same scope of invention as to those in claim 14 above; therefore, claim 16 is rejected for the same rejection rationale/basis as described in claim 14.

Regarding claim 17, both Sato and Takeoka teaches a storage medium for storing computer program (main memory, fig. 1, Takeoka).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

• U.S. 6804018 to Mochizuki, teaches a method for dividing print data into multiple packets and creating a linkage information for each packet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 2727439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

GABRIEL GARCIA
PRIMARY EXAMINER